

QS
P637o
1882

OUTLINES
—160221—
ANATOMY & PHYSIOLOGY.
—444—
J. M. PILE.

SURGEON GENERAL'S OFFICE
LIBRARY

Section _____

Form 113c **No.** 292395
W.D., S. G. O.

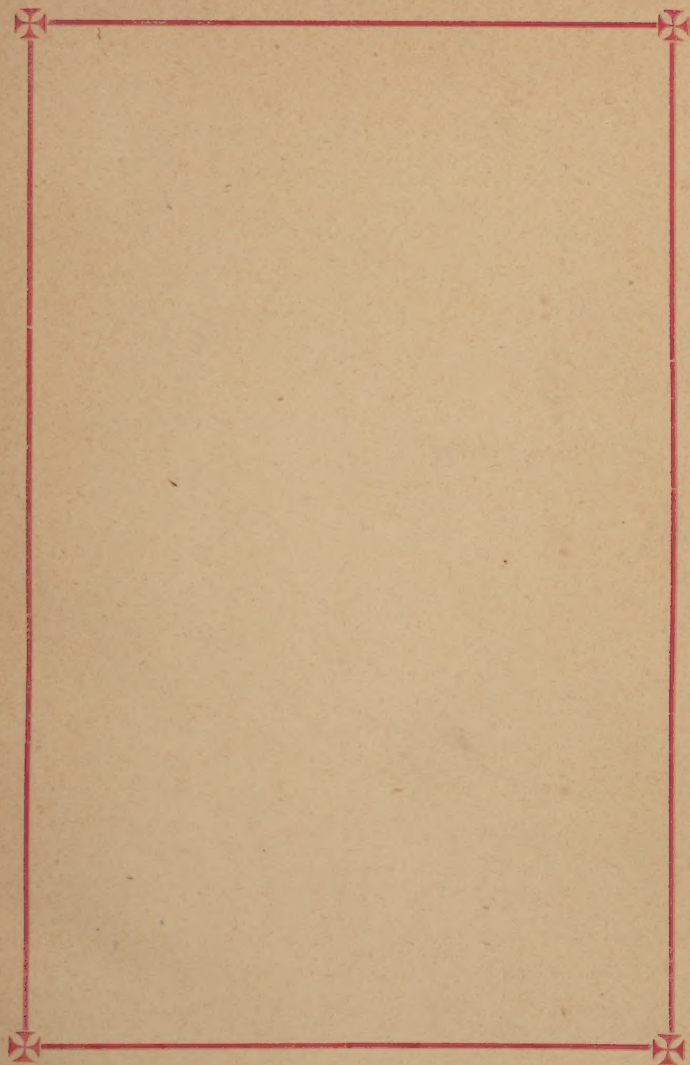
QS P637o 1882

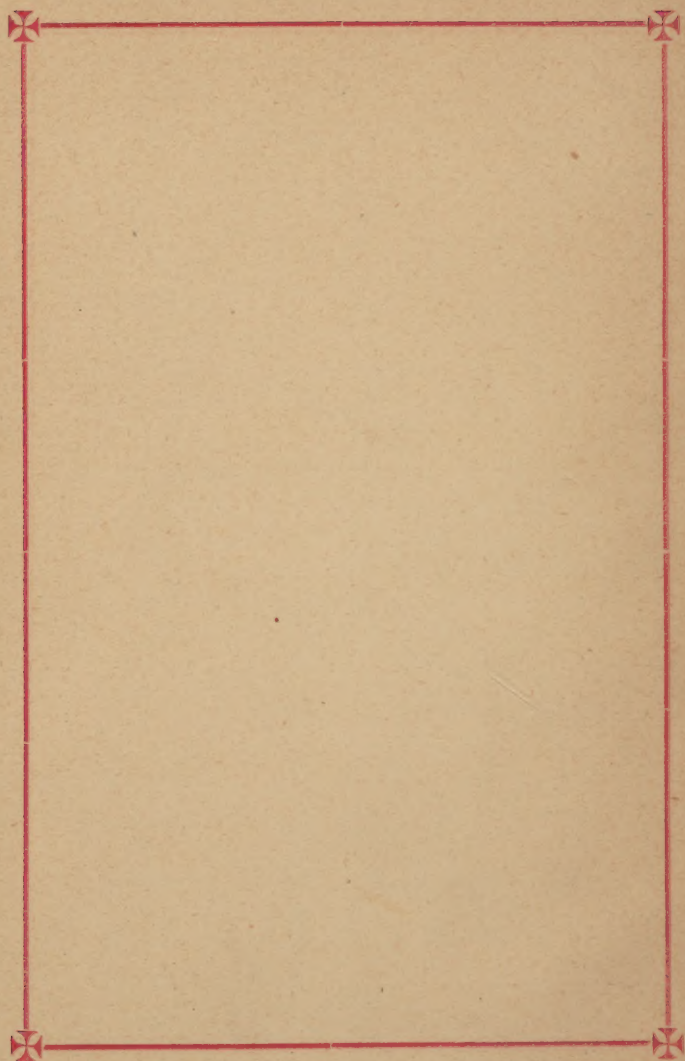
61120960R



NLM 05041736 0

NATIONAL LIBRARY OF MEDICINE





OUTLINES

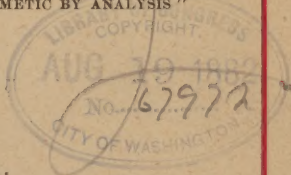
—OF—

ANATOMY AND **P**HYSIOLOGY:

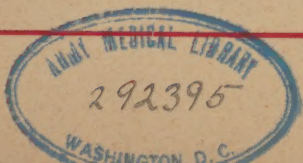
—BY—

J. M. PILE,

INSTRUCTOR IN PHYSIOLOGY IN THE NORTHERN ILLINOIS NORMAL
SCHOOL, AND AUTHOR OF "ARITHMETIC BY ANALYSIS"



DIXON, ILL:
W. M. KENNEDY, PRINTER.
1882,

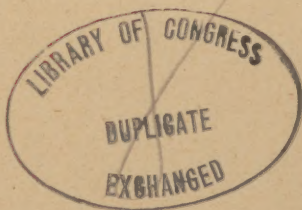


Annet

Q5

p6370

1882



PREFACE:

Generally speaking, so little progress has been made in systematizing methods of teaching Anatomy and Physiology that no excuse need be made for the present work. It is arranged to supply the demands of the author's classes. He has found it a valuable aid in inspiring pupils to an investigation of the subject and fixing it methodically in their minds. The main divisions are found in the left margin of the *Outline*. Under these come the subdivisions receding to the right in the order of their importance. The classification is shown not only in this manner, but by the system of numbers and indices. All co-ordinate topics have the same index while the large number shows the number of subdivisions under each topic. By this means we get the logical arrangement of an outline and have the topics conveniently arranged for class recitation.

J. M. PYLE.

DIXON, ILLINOIS.





SKELETON.



1¹ DEFINITION.

2¹ ORGANS.

1² BONES.

1³ DEFINITION.

2³ CHEMICAL COMPOSITION.

1⁴ INORGANIC MATERIAL

2⁴ ORGANIC MATERIAL.

3³ PHYSICAL PROPERTIES.

4³ KINDS OF TISSUE.

1⁴ COMPACT.

2⁴ CANCELLOUS.

5³ MINUTE ANATOMY.

1⁴ HAVERSIAN CANALS.

2⁴ LACUNÆ.

3⁴ CANALICULI.

4⁴ ULTIMATE GRANULES.

6³ MARROW.

7³ MEMBRANES.

1⁴ PERIOSTEUM.

1⁵ DEFINITION.

2⁵ USES.

2⁴ ENDOSTEUM.

8³ MEDULLARY CANAL.

9³ CLASSES.

- 1⁴ LONG.
- 2⁴ SHORT.
- 3⁴ FLAT.
- 4⁴ IRREGULAR.
- 10³ EMINENCES.
 - 1⁴ NON-ARTICULAR.
 - 1⁵ TUBEROSITIES.
 - 2⁵ TUBERCLES,
 - 3⁵ PROCESSES.
 - 4⁵ SPINES.
 - 2⁴ ARTICULAR.
- 11³ DEPRESSIONS.
 - 1⁴ NON-ARTICULAR.
 - 1⁵ FOSSÆ.
 - 2⁵ GROOVES.
 - 3⁵ FURROWS.
 - 4⁵ FISSURES.
 - 5⁵ NOTCHES.
 - 2⁴ ARTICULAR.
- 12³ GROUPS.
 - 1⁴ HEAD.
 - 1⁵ CRANIUM.
 - 1⁶ FRONTAL.
 - 2⁶ TEMPORAL.
 - 3⁶ PARIETAL,
 - 4⁶ OCCIPITAL.
 - 5⁶ ETHMOID.
 - 6⁶ SPHENOID.
 - 2⁵ FACE.
 - 1⁶ NASAL.
 - 2⁶ LACHRYMAL.
 - 3⁶ MALAR.
 - 4⁶ TURBINATED.
 - 5⁶ VOMER.

- 6⁶ SUPERIOR MAXILLARY.
- 7⁶ INFERIOR MAXILLARY.
- 8⁶ PALATAL.
- 3⁵ EAR.
 - 1⁶ MALLEUS.
 - 2⁶ INCUS.
 - 3⁶ OBBICULAR.
 - 4⁶ STAPES.
- 2⁴ TRUNK.
 - 1⁵ SPINAL COLUMN.
 - 1⁶ CERVICAL VERTEBRÆ.
 - 2⁶ DORSAL VERTEBRÆ.
 - 3⁶ LUMBAR VERTEBRÆ.
 - 2⁵ STERNUM
 - 1⁶ MANUBRIUM.
 - 2⁶ GLADIOLUS.
 - 3⁶ ENSIFORM APPENDIX.
 - 3⁵ RIBS.
 - 1⁶ TRUE.
 - 2⁶ FALSE.
 - 1⁷ FLOATING.
 - 2⁷ NON-FLOATING.
 - 4⁵ OS-HYOIDES.
 - 5⁵ PELVIS
 - 1⁶ SACRUM.
 - 2⁶ COCCYX.
 - 3⁶ INNOMINATA.
 - 1⁷ ILIUM.
 - 2⁷ ISCHIUM.
 - 3⁷ PUBES.
- 3⁴ EXTREMITIES.
 - 1⁵ UPPER.
 - 1⁶ SHOULDER.
 - 1⁷ SCAPULA.

- 2⁷ CLAVICLE.
- 2⁶ ARM.
 - 1⁷ HUMERUS.
 - 2⁷ ULNA.
 - 3⁷ RADIUS.
- 3⁶ HAND.
 - 1⁷ CARPUS.
 - 1⁸ FIRST ROW.
 - 1⁹ SCAPHOID.
 - 2⁹ SEMILUNAR.
 - 3⁹ CUNEIFORM.
 - 4⁹ PISIFORM.
 - 2⁸ SECOND ROW.
 - 1⁹ TRAPEZIUM.
 - 2⁹ TRAPEZOID.
 - 3⁹ OS MAGNUM.
 - 4⁹ UNCIFORM.
 - 2⁷ METACARPUS.
 - 3⁷ PHALANGES.
- 2⁵ LOWER.
 - 1⁶ THIGH.
 - 1⁷ FEMUR.
 - 2⁶ LEG.
 - 1⁷ PATELLA.
 - 2⁷ TIBIA.
 - 3⁷ FIBULA.
 - 3⁶ FOOT.
 - 1⁷ TARSUS.
 - 1⁸ ASTRAGALUS.
 - 2⁸ OS CALCIS.
 - 3⁸ SCAPHOID,
 - 4⁸ CUBOID.
 - 5⁸ CUNEIFORM.
 - 1⁹ EXTERNAL.

2⁹ MIDDLE.

3⁹ INTERNAL.

2⁷ METATARSUS.

3⁷ PHALANGES.

13³ USES.

14³ HYGIENE.

2² LIGAMENTS.

1³ YELLOW ELASTIC.

2³ WHITE FIBROUS,

3² CARTILAGES.

1³ RETICULAR.

2³ FIBRO.

1⁴ INTERARTICULAR.

2⁴ CONNECTING.

3⁴ CIRCUMFERENTIAL.

4⁴ STRATIFORM.

4² SYNOVIAL MEMBRANE.

1³ ARTICULAR.

2³ BURSAL.

3³ VAGINAL.

3¹ ARTICULATIONS.

1² SYNARTHROSIS.

1³ DEFINITION.

2³ SCHINDYLESIS.

3³ SUTURES.

4³ GOMPHOSIS.

2² AMPHIARTHIROSIS.

3² DIARTHIROSIS.

1³ DEFINITION.

2³ GLIDING.

3³ BALL AND SOCKET.

4³ HINGE.

MUSCLES:



- 1¹ DEFINITION.
- 2¹ STRUCTURE.
 - 1² FASCICULA.
 - 1³ DEFINITION.
 - 2³ FIBRES.
 - 1⁴ DEFINITION.
 - 2⁴ STRUCTURE.
 - 3⁴ STRIPED.
 - 4⁴ UNSTRIPED.
 - 5⁴ CHARACTERISTICS.
 - 6⁴ INVESTMENT.
 - 3³ SARCOLEMMMA.
- 3¹ BLOOD VESSELS.
- 4¹ LYMPHATICS.
- 5¹ NERVES.
- 6¹ INVESTMENT.
- 7¹ PARTS.
 - 1² ORIGIN.
 - 2² SWELL.
 - 3² INSERTION.
- 8¹ FORMS.
 - 1² FUSIFORM.
 - 2² RADIATE.
 - 3² PENIFORM.
 - 4² BIPENIFORM.
 - 5² SPHINCTER.

6² HOLLOW.

9¹ KINDS.

1² VOLUNTARY.

1³ DEFINITION.

2³ LOCATION.

3³ FUNCTION.

2² INVOLUNTARY.

1³ DEFINITION.

2³ LOCATION.

3³ FUNCTION.

3² MIXED.

1³ DEFINITION.

2³ LOCATION.

3³ FUNCTION.

10¹ NAMES.

1² FLEXOR.

2² EXTENSOR.

3² ABDUCTOR.

4² ADDUCTOR.

5² DEPRESSOR.

6² COMPRESSOR.

7² DILATOR.

11¹ GROUPS.

1² HEAD AND NECK.

2² TRUNK.

3² UPPER EXTREMITIES.

4² LOWER EXTREMITIES.

12¹ FUNCTIONS.

13¹ TENDONS.

1² DEFINITION.

2² STRUCTURE.

3² FUNCTION.

14¹ APONEUROSIS.

1² DEFINITION.

2² STRUCTURE.

3² FUNCTION.

15¹ FASCIÆ.

1² DEFINITION. •

2² KINDS.

1³ SUPERFICIAL.

1⁴ DEFINITION.

2⁴ STRUCTURE.

3⁴ FUNCTION.

2³ DEEP.

1⁴ DEFINITION.

2⁴ STRUCTURE.

3⁴ FUNCTION.

16¹ HYGIENE.



DIGESTION.

1¹ DEFINITION.

2¹ ORGANS.

1² MOUTH.

2² TEETH.

1³ DEFINITION.

2⁵ STRUCTURE.

1⁴ ENAMEL.

2⁴ DENTINE.

3⁴ CEMENTUM.

3³ PARTS.

1⁴ CROWN.

2⁴ NECK.

3⁴ FANG.

4³ SETS.

1⁴ TEMPORARY.

1⁵ INSCISORS.

2⁵ CUSPIDS.

3⁵ MOLARS.

2⁴ PERMANENT.

1⁵ INSCISSORS.

2⁵ CUSPIDS.

3⁵ BICUSPIDS.

4⁵ MOLARS.

5³ DEVELOPMENT.

6³ FUNCTIONS.

7³ HYGIENE.

3² SALIVARY GLANDS.

1³ DEFINITION.

2³ STRUCTURE.

3³ PAROTID.

1⁴ LOCATION.

2⁴ DUCT.

3⁴ SIZE AND WEIGHT.

4³ SUBMAXILLARY.

1⁴ LOCATION.

2⁴ DUCT.

3⁴ SIZE AND WEIGHT.

5³ SUBLINGUAL.

1⁴ LOCATION.

2⁴ DUCTS.

3⁴ SIZE AND WEIGHT.

6³ SECRETION.

1⁴ COMPOSITION.

2⁴ FUNCTION.

4² PHARYNX.

1³ DEFINITION.

2³ SHAPE.

3³ LENGTH.

4³ OPENINGS.

1⁴ POSTERIOR NARES.

2⁴ EUSTACHIAN TUBE.

3⁴ MOUTH.

4⁴ OESOPHAGUS.

5⁴ LARYNX.

5³ FUNCTION.

5² OESOPHAGUS.

1³ DEFINITION.

2³ COATS.

1⁴ MUCOUS.

2⁴ MUSCULAR.

- 3⁴ AREOLAR.
- 3³ FUNCTION.
- 6² STOMACH.
- 1³ DEFINITION.
- 2³ COATS.
- 1⁴ MUCOUS.
- 2⁴ MUSCULAR.
- 3⁴ SEROUS.
- 3³ ORIFICES.
- 1⁴ CARDIAC.
- 2⁴ PYLORIC.
- 4³ GLANDS.
- 1⁴ MUCOUS.
- 2⁴ PEPTIC.
- 1⁵ LOCATION.
- 2⁵ SECRETION.
- 1⁶ COMPOSITION.
- 2⁶ FUNCTION.
- 5³ MOVEMENTS.
- 6³ FUNCTIONS.
- 7² INTESTINES.
- 1³ DEFINITION.
- 2³ COATS.
- 1⁴ MUCOUS.
- 2⁴ MUSCULAR.
- 3⁴ SEROUS.
- 3³ SECTIONS.
- 1⁴ SMALL.
- 1⁵ DIVISIONS.
- 1⁶ DUODENUM.
- 2⁶ JEJUNUM.
- 3⁶ ILEUM.
- 2⁵ GLANDS.
- 1⁶ SECRETION.

- 1⁷ COMPOSITION.
- 2⁷ FUNCTION.
- 3⁵ FUNCTION.
- 2⁴ LARGE.
 - 1⁵ DIVISIONS.
 - 1⁶ CÆCUM.
 - 1⁷ ASCENDING.
 - 2⁷ TRANSVERSE.
 - 3⁷ DESCENDING.
 - 4⁷ SIGMOID FLEXURE.
 - 3⁶ RECTUM.
 - 4³ FUNCTIONS.
- 8² LACTEALS.
 - 1³ DEFINITION.
 - 2³ STRUCTURE.
 - 3³ FUNCTION.
- 9² THORACIC DUCT.
 - 1³ DEFINITION.
 - 2³ STRUCTURE.
 - 3³ FUNCTION.
- 10² PANCREAS.
 - 1³ DEFINITION.
 - 2³ STRUCTURE.
 - 4³ DUCT.
 - 5³ FUNCTION.
- 11² SPLEEN.
 - 1³ DEFINITION.
 - 2³ STRUCTURE.
- 12² LIVER.
 - 1³ DEFINITION.
 - 3³ WEIGHT.
 - 3³ STRUCTURE.
 - 1⁴ LOBULES.
 - 2⁴ VESSELS.

- 1⁵ HEPATIC ARTERY.
- 2⁵ HEPATIC VEIN.
- 3⁵ PORTAL VEIN.
- 4⁵ BILE DUCTS.
 - 1⁶ HEPATIC.
 - 2⁶ CYSTIC.
 - 3⁶ COMMON BILE DUCT.
- 3⁴ CELLS.
- 4³ SECRETION.
 - 1⁴ COMPOSITION.
 - 2⁴ COLOR.
 - 3⁴ AMOUNT.
 - 4⁴ FUNCTION.
- 3¹ PROCESSES.
 - 1² MASTICATION.
 - 2² INSALIVATION.
 - 3² DEGLUTITION.
 - 4² CHYMFICATION.
 - 5² CHYLIFICATION.
 - 6² SEPARATION.
 - 7² ABSORPTION.



CIRCULATION.

1¹ DEFINITION.2¹ ORGANS.1² HEART.1³ STRUCTURE.2³ SHAPE.3³ SIZE AND WEIGHT.4³ LOCATION.5³ MEMBRANES.1⁴ PERICARDIUM.2⁴ ENDOCARDIUM.6³ NERVES.1⁴ PNEUMOGASTRIC.2⁴ SYMPATHETIC.7³ DIVISIONS.1⁴ ARTERIAL.1⁵ WALLS.2⁵ VALVES.1⁶ SEMI-LUNAR.1⁷ LOCATION.2⁷ NUMBER.3⁷ STRUCTURE.4⁷ FUNCTION.2⁶ MITRAL.1⁷ LOCATION.2⁷ NUMBER.3⁷ STRUCTURE.

- 4⁷ FUNCTION.
- 3⁵ CAVITIES.
 - 1⁶ AURICLE.
 - 2⁶ VENTRICLR.
- 2⁴ VENOUS.
 - 1⁵ WALLS.
 - 2⁵ VALVES.
 - 1⁶ SEMI-LUNAR.
 - 1⁷ LOCATION.
 - 2⁷ NUMBER.
 - 3⁷ STRUCTURE.
 - 4⁷ FUNCTION.
 - 3⁶ TRICUSPID.
 - 1⁷ LOCATION.
 - 2⁷ NUMBER.
 - 3⁷ STRUCTURE.
 - 4⁷ FUNCTION.
- 3⁵ CAVITIES.
 - 1⁶ AURICLE.
 - 2⁶ VENTRICLE.
- 8³ MOVEMENTS.
 - 1⁴ SYSTOLE.
 - 2⁴ DIASTOLE.
- 9³ SOUNDS.
 - 1⁴ FIRST.
 - 1⁵ CHARACTER.
 - 2⁵ CAUSES.
 - 1⁶ CLOSING OF TRICUSPID AND MITRAL VALVES.
 - 1⁶ RUSH OF BLOOD AMONG THE CHORRÆ TENDINÆ.
 - 3⁶ IMPULSE OF HEART AGAINST WALLS OF CHEST.
- 2⁴ SECOND.

1⁵ CHARACTER.

2⁵ CAUSE.

1⁶ CLOSING OF SEMILUNAR
VALVES.

2² ARTERIES.

1³ DEFINITION.

2³ LOCATION.

3³ SIZE.

4³ COATS.

1⁴ SEROUS.

2⁴ FIBROUS.

3⁴ CELLULAR.

5³ COMMUNICATIONS.

3² CAPILLARIES.

1³ DEFINITION.

2³ COATS.

4² VEINS.

1³ DEFINITION.

2³ LOCATION.

3³ COATS.

1⁴ SEROUS.

2⁴ FIBROUS.

3⁴ CELLULAR.

4³ VALVES.

5³ COMMUNICATIONS.

3¹ SYSTEMS.

1² ARTERIAL.

1³ KIND OF BLOOD.

2³ CHARACTER OF FLOW OF BLOOD.

3³ CAUSE OF FLOW OF BLOOD.

2² CAPILLARY.

1³ CHARACTER OF FLOW OF BLOOD.

2³ CAUSE OF FLOW OF BLOOD.

3² VENOUS.

1³ KIND OF BLOOD.

2³ CHARACTER OF FLOW OF BLOOD.

3³ CAUSES OF FLOW OF BLOOD.

1⁴ CARDIAC IMPULSE.

2⁴ MUSCULAR CONTRACTION.

3⁴ ASPIRATION.

4² CARDIAC.

1³ KIND OF BLOOD.

2³ CAUSE OF MOVEMENT OF BLOOD.

1⁴ SYSTOLE.

2⁴ DIASTOLE.

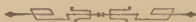
4¹ SYSTEMIC.

5¹ PULMONIC.

6¹ PORTAL.



RESPIRATION.



1¹ DEFINITION.

2¹ ORGANS.

1² LARYNX.

1³ DEFINITION.

2³ CARTILAGES.

1⁴ THYROID.

2⁴ CRICOID.

3⁴ ARYTENOID.

4⁴ EPIGLOTTIS.

3³ MEMBRANES.

THYRO-HYOID.

2⁴ CRICO-THYROID.

4³ VOCAL CORDS.

1⁴ FALSE.

2⁴ TRUE.

5³ GLOTTIS.

6³ MOVEMENTS.

7³ MUSCLES.

8³ NERVES.

1⁴ EXTERNAL LARYNGEAL.

2⁴ RECURRENT LARYNGEAL.

9³ VENTRICLES.

10³ FUNCTION.

2² TRACHEA.

1³ DEFINITION.

2³ SIZE.

- 3³ FIBRO-CARTILAGES.
- 4³ MEMBRANE.
- 5³ FUNCTION.
- 3² BRONCHI.
 - 1³ DEFINITION.
 - 2³ RIGHT.
 - 3³ LEFT.
 - 4³ FUNCTION.
- 4² LUNGS.
 - 1³ DEFINITION.
 - 2³ SHAPE.
 - 3³ WEIGHT.
 - 4³ LOBES.
 - 5³ COLOR.
 - 6³ AIR CELLS.
 - 7³ PARENCHYMA.
 - 8³ SOURCE OF BLOOD.
 - 1⁴ PULMONARY ARTERIES.
 - 2⁴ BRONCHIAL ARTERIES.
 - 9³ NERVES.
 - 1⁴ PNEUMOGASTRIC.
 - 2⁴ SYMPATHETIC.
- 10³ ROOTS.
 - 1⁴ BRONCHI.
 - 2⁴ NERVES.
 - 3⁴ PULMONARY VESSELS.
 - 4⁴ CONNECTIVE TISSUE.
- 11³ PLEURA.
 - 1⁴ DEFINITION.
 - 2⁴ LAYERS.
 - 3⁴ FUNCTIONS.
- 12³ FUNCTIONS.
- 5² DIAPHRAGM.
 - 1³ DEFINITION.

- 2³ SHAPE.
- 3³ ATTACHMENTS.
- 4³ LAYERS.
- 5³ NERVE.
- 6³ FUNCTION.
- 6² MUSCLES.
 - 1³ INSPIRATORY.
 - 2³ EXPIRATORY.
- 7² RIBS.
- 3¹ PARTS.
 - 1² INSPIRATION.
 - 1³ DEFINITION.
 - 2³ MOVEMENTS.
 - 1⁴ DIAPHRAGM IS DEPRESSED.
 - 2⁴ RIBS ARE ELEVATED.
 - 3⁴ STERNUM MOVES FORWARD.
 - 2² EXPIRATION.
 - 1³ DEFINITION.
 - 2³ MOVEMENTS.
 - 1⁴ DIAPHRAGM IS ELEVATED.
 - 2⁴ RIBS ARE DEPRESSED.
 - 3⁴ STERNUM MOVES BACK.
- 4¹ OBJECTS.
 - 1² TO FURNISH OXYGEN.
 - 1³ USES.
 - 1⁴ TO CONVERT THE CHYLE INTO BLOOD.
 - 2⁴ TO PRODUCE ANIMAL HEAT.
 - 2² TO REMOVE WASTE MATTER FROM THE BLOOD.
- 5¹ AIR.
 - 1² COMPOSITION.
 - 1³ OXYGEN.
 - 2³ NITROGEN.

3³ CARBONIC ANHYDRIDE.

2² CHANGES.

1³ LOSES OXYGEN IN THE LUNGS,

2³ TAKES UP CARBONIC ANHYDRIDE
AND WATERY VAPOR.

3² KINDS.

1³ RESIDUAL.

2³ SUPPLEMENTAL.

3³ TIDAL.

4³ COMPLEMENTAL.



ABSORPTION,

1¹ DEFINITION.

2¹ ORGANS.

1² LYMPHATICS.

1³ DEFINITION.

2³ ORIGIN.

3³ COURSE.

4³ COATS.

1⁴ FIBROUS.

2⁴ MUSCULAR.

3⁴ CELLULAR.

5³ COMMUNICATIONS.

6³ VALVES.

7³ KINDS.

1⁴ SUPERFICIAL.

2⁴ DEEP.

8³ FUNCTION.

2² GLANDS.

1³ DEFINITION.

2³ STRUCTURE.

3³ VESSELS.

1⁴ AFFERENT.

2⁴ EFFERENT.

4³ KINDS.

1⁴ LYMPHATIC.

1⁵ LOCATION.

2⁵ FUNCTION.

2⁴ MESENTERIC.

3² LACTEALS.

1³ DEFINITION.

2³ STRUCTURE.

3³ ORIGIN.

4³ COURSE.

5³ COMMUNICATIONS.

6³ KINDS.

1⁴ SUPERFICIAL.

2⁴ DEEP.

7³ FUNCTION.

4² THORACIC DUCT.

1³ DEFINITION.

2³ STRUCTURE.

3³ ORIGIN.

4³ COURSE.

5³ LENGTH.

6³ SIZE.

7³ COATS.

1⁴ INTERNAL.

- 2⁴ MIDDLE.
- 3⁴ EXTERNAL.
- 8³ BRANCHES.
- 9³ TERMINATION.
- 10³ VALVES.
- 11³ FUNCTION.
- 3¹ KINDS.
 - 1² INTERSTITIAL.
 - 1³ DEFINITION.
 - 2³ FUNCTION.
 - 2² RECREMENTITIAL.
 - 1³ DEFINITION.
 - 2³ FUNCTION.
 - 3² EXCREMENTITIAL.
 - 1³ DEFINITION.
 - 2³ FUNCTION.
 - 4² CUTANEOUS.
 - 1³ DEFINITION.
 - 2³ FUNCTION.
 - 5² RESPIRATORY.
 - 1³ DEFINITION.
 - 2³ FUNCTION.
 - 6² VENOUS.
 - 1³ DEFINITION.
 - 2³ FUNCTION.
 - 7² LACTEAL.
 - 1³ DEFINITION.
 - 2³ FUNCTION.
- 4¹ HYGIENE.

SECRETION.

1¹ DEFINITION.

2¹ ORGANS.

1² EXHALANTS.

1³ DEFINITION.

2³ STRUCTURE.

3³ LOCATION.

4³ KINDS.

1⁴ EXTERNAL.

2⁴ INTERNAL.

5³ FUNCTION.

2² FOLLICLES.

1³ DEFINITION.

2³ STRUCTURE.

3³ LOCATION.

4³ FUNCTION.

3² GLANDS.

1³ DEFINITION.

2³ STRUCTURE.

3³ BLOOD-VESSELS.

4³ LYMPHATICS.

5³ NERVES.

6³ DUCTS.

7³ KINDS.

1⁴ SALIVARY.

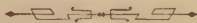
2⁴ LIVER.

3⁴ PANCREAS.

- 4⁴ KIDNEYS.
- 5⁴ MUCUOUS.
- 8³ FUNCTIONS.
- 3¹ KINDS.
 - 1² EXCREMENTITIOUS.
 - 1³ DEFINITION.
 - 2³ FUNCTION.
 - 2² RECREMENTITIOUS.
 - 1³ DEFINITION.
 - 2³ FUNCTION.
- 4¹ HYGIENE.



SKIN.



- 1¹ DEFINITION.
- 2¹ LAYERS.
 - 1² CUTIS VERA.
 - 1³ DEFINITION.
 - 2³ STRUCTURE.
 - 3³ BLOOD-VESSELS.
 - 4³ LYMPHATICS.
 - 5³ NERVES.
 - 6³ PARTS.
 - 1⁴ CORIUM.
 - 1⁵ DEFINITION.
 - 2⁵ STRUCTURE.

2⁴ PAPILLARY.

1⁵ DEFINITION.

2⁵ STRUCTURE.

7³ AREOLA.

8³ GLANDS.

1⁴ KINDS.

1⁵ PERSPIRATORY.

1⁶ DEFINITION.

2⁶ LOCATION.

3⁶ SECRETION.

1⁷ COMPOSITION.

2⁷ AMOUNT.

4⁶ TUBES.

1⁷ DEFINITION.

2⁷ FORM.

3⁷ LENGTH.

5⁶ FUNCTION.

2⁵ SEBACEOUS.

1⁶ DEFINITION.

2⁶ LOCATION.

3⁶ SECRETION.

4⁶ DUCTS.

5⁶ FUNCTION.

3⁵ CERUMINOUS.

1⁶ DEFINITION.

2⁶ LOCATION.

3⁶ SECRETION.

4⁶ COLOR.

5⁶ FUNCTION.

9³ FUNCTION.

2² CUTICLE.

1³ DEFINITION.

2³ STRUCTURE.

3³ FURROWS.

- 4³ GROWTH.
- 5³ PORES.
- 6³ CELLS.
- 7³ PIGMENT.
- 8³ FUNCTION.
- 3¹ APPENDAGES.
- 1² NAILS.
 - 1³ DEFINITION.
 - 2³ STRUCTURE.
 - 3³ PARTS.
 - 1⁴ ROOT.
 - 2⁴ BODY.
 - 3⁴ LUNULA.
 - 4⁴ FREE EDGE.
 - 4³ FORM.
 - 5³ GROWTH.
 - 6³ FUNCTION.
- 2² HAIRS.
 - 1³ DEFINITION.
 - 2³ STRUCTURE.
 - 3³ PARTS.
 - 1⁴ ROOT.
 - 2⁴ SHAFT.
 - 1⁵ MEDULLA.
 - 2⁵ CORTEX.
 - 4³ FORM.
 - 5³ GROWTH.
 - 6³ FOLLICLES.
 - 1⁴ DEFINITION.
 - 2⁴ COATS.
 - 3⁴ CELLS.
 - 4⁴ PIGMENT.
 - 7³ FUNCTION.
- 4¹ HYGIENE.

ANIMAL HEAT.

- 1¹ DEFINITION.
- 2¹ SOURCES.
- 3¹ DISTRIBUTION.
- 4¹ NECESSITY.
- 5¹ QUANTITY.
- 6¹ VARIATIONS.
- 7¹ LOCAL PRODUCTION.
- 8¹ LOCAL ELEVATION OF TEMPERATURE.
- 9¹ EQUALIZATION OF TEMPERATURE.
- 10¹ REGULATION OF TEMPERATURE.
 - 1² BY VARIATIONS IN LOSS.
 - 2² BY VARIATIONS IN PRODUCTION.
- 11¹ EFFECTS.
 - 1² OF FOOD.
 - 2² OF RESPIRATION.
 - 3² OF LOWERING THE TEMPERATURE.
 - 4² OF ELEVATING THE TEMPERATURE.
- 12¹ RESISTANCE.
 - 1² TO LOW EXTERNAL TEMPERATURE.
 - 2² TO HIGH EXTERNAL TEMPERATURE.
- 13¹ ATMOSPHERIC INFLUENCES.
- 14¹ MODIFICATIONS.
 - 1² BY AMOUNT OF CARBON IN FOOD.
 - 2² BY EXERCISE.
 - 3² BY AGE OF INDIVIDUAL.
 - 4² BY HEALTH OF INDIVIDUAL.

- 5² BY CONSTITUTION OF INDIVIDUAL.
- 6² BY QUANTITY OF AIR.
- 7² BY QUALITY OF AIR.
- 8² BY CONDITION OF NERVOUS SYSTEM.
- 9² BY CONDITION OF SKIN.
- 10² BY AMOUNT OF CLOTHING.
- 11² BY KIND OF CLOTHING.



NERVOUS SYSTEM.



- 1¹ DEFINITION.
- 2¹ NERVE MATTER.
 - 1² DEFINITION.
 - 2² CHEMICAL COMPOSITION.
 - 3² KINDS.
 - 1³ WHITE.
 - 1⁴ DEFINITION.
 - 2⁴ ARRANGEMENT.
 - 8⁴ FUNCTION.
 - 2³ GRAY.
 - 1⁴ DEFINITION.
 - 2⁴ ARRANGEMENT.
 - 3⁴ FUNCTION.
- 4² SYSTEMS.
 - 1³ CEREBRO SPINAL.

1⁴ DEFINITION.

2⁴ DIVISIONS.

1⁵ BRAIN.

1⁶ DEFINITION.

2⁶ STRUCTURE.

3⁶ PARTS.

1⁷ CEREBRUM.

1⁸ DEFINITION.

2⁸ SHAPE.

3⁸ SIZE.

4⁸ CONVOLUTIONS.

5⁸ DIVISIONS.

6⁸ VENTRICLES.

7⁸ FUNCTION.

2⁷ CEREBELLUM.

1⁸ DEFINITION.

2⁸ SHAPE.

3⁸ SIZE.

4⁸ DIVISIONS.

5⁸ VENTRICLE.

6⁸ FUNCTION.

3⁷ MEDULLA OBLONGATA.

1⁸ DEFINITION.

2⁸ SHAPE.

3⁸ SIZE.

4⁸ DIVISIONS.

1⁹ CORPUS PYRAMIDALE.

2⁹ RESTIFORME.

3⁹ OLIVARE.

5⁸ FUNCTIONS.

4⁶ MEMBRANES.

1⁷ DURA MATER.

1⁸ DEFINITION.

2⁸ STRUCTURE.

- 3⁸ BLOOD-VESSELS.
- 4⁸ PROCESSES.
 - 1⁹ FALX-CEREBRI.
 - 2⁹ FALX-CEREBELLI.
 - 3⁹ TENTORIUM.
- 5⁸ FUNCTION.
- 2⁷ ARACHNOID.
 - 1⁸ DEFINITION.
 - 2⁸ STRUCTURE.
 - 3⁸ SUB-ARACHNOID SPACE.
 - 4⁸ CEREBRO-SPINAL FLUID.
 - 5⁸ FUNCTION.
- 3⁷ PIA-MATER.
 - 1⁸ DEFINITION.
 - 2⁸ STRUCTURE.
 - 3⁸ FUNCTION.
- 2⁵ CRANIAL NERVES.
 - 1⁶ DEFINITION.
 - 2⁶ STRUCTURE.
 - 3⁶ INVESTMENT.
 - 4⁶ KINDS.
 - 1⁷ SPECIAL SENSE.
 - 2⁷ GENERAL SENSE.
 - 3⁷ MOTOR.
 - 4⁷ MIXED.
 - 3⁶ PAIRS.
 - 1⁷ OLFACTORY.
 - 1⁸ ORIGIN.
 - 2⁸ COURSE.
 - 3⁸ DESTINATION.
 - 4⁸ FUNCTION.
 - 2⁷ OPTIC.
 - 1⁸ ORIGIN.
 - 2⁸ COURSE.

3⁸ DESTINATION.

4⁸ FUNCTION.

3⁷ MOTORES OCULOREM.

1⁸ ORIGIN.

2⁸ COURSE.

3⁸ DESTINATION.

4⁸ FUNCTION.

4⁷ PATHETICUS.

1⁸ ORIGIN.

2⁸ COURSE.

3⁸ DESTINATION.

4⁸ FUNCTION.

5⁷ TRIFICIAL.

1⁸ ORIGIN.

2⁸ BRANCHES.

1⁹ OPHTHALMIC.

1¹⁰ COURSE.

2¹⁰ DESTINATION.

2¹⁰ FUNCTION.

2⁹ SUPERIOR MAXILLARY.

1¹⁰ COURSE.

2¹⁰ DESTINATION.

3¹⁰ FUNCTION.

3⁹ INFERIOR MAXILLARY.

1¹⁰ COURSE.

2¹⁰ DESTINATION.

3¹⁰ FUNCTION.

6⁷ ABDUCENS.

1⁸ ORIGIN.

2⁸ COURSE.

3⁸ DESTINATION.

4⁸ FUNCTION.

7⁷ FACIAL OR PORTIO-DURA.

1⁸ ORIGIN.

- 2⁸ COURSE.
- 3⁸ DESTINATION.
- 4⁸ FUNCTION.
- 8⁷ AUDITORY OR PORTIO-MOLLIS.
 - 1⁸ ORIGIN.
 - 2⁸ COURSE.
 - 3⁸ DESTINATION.
 - 4⁸ FUNCTION.
- 9⁷ GLOSSOPHARYNGIAL.
 - 1⁸ ORIGIN.
 - 2⁸ COURSE.
 - 3⁸ DESTINATION.
 - 4⁸ FUNCTION.
- 10⁷ PNEUMOGASTRIC.
 - 1⁸ ORIGIN.
 - 2⁸ COURSE.
 - 3⁸ DESTINATION.
 - 4⁸ FUNCTION.
- 11⁷ SPINAL ACCESSORY.
 - 1⁸ ORIGIN.
 - 2⁸ COURSE.
 - 3⁸ DESTINATION.
 - 4⁸ FUNCTION.
- 12⁷ HYPOGLOSSAL.
 - 1⁸ ORIGIN.
 - 2⁸ COURSE.
 - 3⁸ DESTINATION.
 - 4⁸ FUNCTION.
- 3⁶ SPINAL CORD.
 - 1⁶ DEFINITION.
 - 2⁶ STRUCTURE.
 - 3⁶ SIZE.
 - 4⁶ LENGTH.

- 5⁶ DIVISIONS.
- 6⁶ FISSURES.
- 7⁶ COLUMNS.
- 8⁶ MEMBRANES.
 - 1⁷ DURA-MATER.
 - 2⁷ ARACHNOID.
 - 3⁷ PIA-MATER.
- 9⁶ FUNCTION.
- 4⁵ SPINAL NERVES.
 - 1⁶ DEFINITION.
 - 2⁶ STRUCTURE.
 - 3⁶ INVESTMENT.
 - 4⁶ KINDS.
 - 1⁷ SENSORY.
 - 1⁸ DEFINITION.
 - 2⁸ ORIGIN.
 - 3⁸ GANGLIA.
 - 1⁹ DEFINITION.
 - 2⁹ STRUCTURE.
 - 3⁹ FUNCTION.
 - 4⁸ DESTINATION.
 - 2⁷ MOTOR.
 - 1⁸ DEFINITION.
 - 2⁸ ORIGIN.
 - 3⁸ DESTINATION.
- 5⁶ DIVISIONS.
 - 1⁷ CERVICAL.
 - 1⁸ NUMBER.
 - 2⁸ ORIGIN.
 - 3⁸ DESTINATION.
 - 2⁷ DORSAL.
 - 1⁸ NUMBER.
 - 2⁸ ORIGIN.
 - 3⁸ DESTINATION.

- 3⁷ LUMBAR.
 - 1⁸ NUMBER.
 - 2⁸ ORIGIN.
 - 3⁸ DESTINATION.
- 4⁷ SACRAL.
 - 1⁸ NUMBER.
 - 2⁸ ORIGIN.
 - 3⁸ DESTINATION.
- 5⁷ COCCYGEAL.
 - 1⁸ NUMBER.
 - 2⁸ ORIGIN.
 - 3⁸ DESTINATION.

2³ SYMPATHETIC.

- 1⁴ DEFINITION.
- 2⁴ STRUCTURE.
- 3⁴ GANGLIA.
- 4⁴ COMMUNICATIONS.
- 5⁴ PARTS.
 - 1⁵ CEPHALIC.
 - 1⁶ DEFINITION.
 - 2⁶ NUMBER OF GANGLIA.
 - 2⁵ CERVICAL.
 - 1⁶ DEFINITION.
 - 2⁶ NUMBER OF GANGLIA.
 - 3⁵ DORSAL.
 - 1⁶ DEFINITION.
 - 2⁶ NUMBER OF GANGLIA.
 - 4⁵ LUMBAR.
 - 1⁶ DEFINITION.
 - 2⁶ NUMBER OF GANGLIA.
 - 5⁵ SACRAL.
 - 1⁶ DEFINITION.
 - 2⁶ NUMBER OF GANGLIA.
 - 6⁵ COCCYGEAL.

- 1⁶ DEFINITION.
- 6⁴ FUNCTION.
- 3¹ HYGIENE.



TOUCH.

- 1¹ DEFINITION.
- 1¹ ORGANS.
 - 1² SKIN.
 - 1³ DEFINITION.
 - 2³ LAYERS.
 - 3³ GLANDS.
 - 4³ APPENDAGES.
 - 2² PAPILLÆ.
 - 1³ DEFINITION.
 - 2³ STRUCTURE.
 - 3³ LOCATION.
 - 4³ BLOODVESSELS.
 - 5³ FORM.
 - 6³ SIZE.
 - 7³ NUMBER TO SQUARE INCH.
 - 8³ KINDS.
 - 1⁴ SIMPLE.
 - 2⁴ COMPOUND.
 - 9³ NERVES.
 - 1⁴ ORIGIN.

2⁴ TERMINATION. [SIONS.

3⁴ CHANGES CAUSED BY IMPRES-

4⁴ FUNCTION.

10³ TACTILE CORPUSCLES.

1⁴ DEFINITION.

2⁴ STRUCTURE.

3⁴ FORM.

4⁴ FUNCTION.

11³ TERMINAL BULBS.

1⁴ DEFINITION.

2⁴ STRUCTURE.

3⁴ FORM.

4⁴ FUNCTION.

3¹ MODIFICATION.

1² BY HEALTHY OR UNHEALTHY BRAIN.

2² BY ACTIVE OR INACTIVE BRAIN.

3² BY STATE OF NERVE TRUNKS.

4² BY QUANTITY OF BLOOD.

5² BY QUALITY OF BLOOD.

6² BY CONDITION OF CUTICLE.

7² BY HABIT.

8² BY EDUCATION.

4¹ SENSATION OF TEMPERATURE.

5¹ SENSATION OF PAIN.

6¹ SENSATION OF PRESSURE.

7¹ MUSCULAR SENSE.

8¹ ACUTENESS IN DIFFERENT PARTS.

TASTE.

1¹ DEFINITION.

2¹ TONGUE.

1³ DEFINITION.

2³ STRUCTURE.

3³ MEMBRANES.

1⁴ CORIUM.

2⁴ EPITHELIUM,

4³ MUSCLES.

5³ BLOODVESSELS.

6³ FOLLICLES.

7³ MUCUOUS GLANDS.

8³ PAPILLÆ.

1⁴ KINDS.

1⁵ SIMPLE.

1⁶ DEFINITION.

2⁶ FORM.

3⁶ LOCATION.

4⁶ FUNCTION.

2⁷ COMPOUND.

1⁶ DEFINITION.

2⁶ CLASSES.

[T.E.

1⁷ MAXILLÆ OR CIRCUMVALLA-

1⁸ STRUCTURE.

2⁸ FORM.

3⁸ LOCATION.

4⁸ SIZE.

- 5⁸ NUMBER.
- 6⁸ SECRETION.
- 7⁸ FUNCTION.
- 2⁷ MEDLE OR FUNGIFORMES.
 - 1⁸ STRUCTURE.
 - 2⁸ FORM.
 - 3⁸ LOCATION.
 - 4⁸ SIZE.
 - 5⁸ FUNCTION.
- 3⁷ MINILE OR FILIFORMES.
 - 1⁸ STRUCTURE.
 - 2⁸ FORM.
 - 3⁸ LOCATION.
 - 4⁸ SIZE.
 - 5⁸ FUNCTION.
- 9³ NERVES.
 - 1⁴ GUSTATORY.
 - 1⁵ ORIGIN.
 - 2⁵ COURSE.
 - 3⁵ DESTINATION.
 - 4⁵ FUNCTION.
 - 2⁴ LINGUAL.
 - 1⁵ ORIGIN.
 - 2⁵ COURSE.
 - 3⁵ DESTINATION.
 - 4⁵ FUNCTION.
 - 3⁴ HYPOGLOSSAL.
 - 1⁵ ORIGIN.
 - 2⁵ COURSE.
 - 3⁵ DESTINATION.
 - 4⁵ FUNCTION.
- 2² SOFT PALATE.
 - 1³ DEFINITION.
 - 2³ STRUCTURE.

- 3³ NERVES.
- 4³ FUNCTION.
- 3² FAUCES.
 - 1³ DEFINITION.
 - 2³ STRUCTURE.
 - 3³ NERVES.
 - 4³ FUNCTION.
- 3¹ USES.
- 4¹ HYGIENE.



SMELL.



- 1¹ DEFINITION.
- 1¹ ORGANS.
 - 1² NOSE.
 - 1³ DEFINITION.
 - 2³ STRUCTURE.
 - 3³ DIVISIONS.
 - 4³ BONES.
 - 5³ CARTILAGES.
 - 6³ MUSCLES.
 - 7³ INTEGUMENT.
 - 8³ FOLLICLES.
 - 9³ MUSCUOUS MEMBRANE.
 - 10³ BLOODVESSELS.
 - 11³ NERVES.

2² NASAL FOSSÆ.

1³ DEFINITION.

2³ STRUCTURE.

3³ MUCUOUS MEMBRANE.

4³ BLOODVESSELS.

5³ DIVISIONS.

1⁴ SUPERIOR MEATUS.

1⁵ DEFINITION.

2⁵ LOCATION.

2⁴ MIDDLE MEATUS.

1⁵ DEFINITION.

2⁵ LOCATION.

3⁴ INFERIOR MEATUS.

1⁵ DEFINITION.

2⁵ LOCATION.

6³ NERVES.

1⁴ OLFACTORY.

1⁵ ORIGIN.

2⁵ COURSE.

3⁵ DESTINATION.

4⁵ FUNCTION.

2⁴ BRANCHES FROM THE MEDULLA.

3⁴ BRANCHES FROM THE SYMPA-
THETIC.

3¹ FUNCTION.

4¹ HYGIENE.

VISION.

- 1¹ DEFINITION.
- 2¹ ORGANS.
 - 1² OPTIC NERVES.
 - 1³ ORIGIN.
 - 2³ COURSE.
 - 3³ DESTINATION.
 - 4³ FUNCTION.
 - 2² GLOBE.
 - 1³ SHAPE.
 - 2³ SIZE.
 - 3³ MUSCLES.
 - 4³ COATS.
 - 1⁴ SCLEROTIC.
 - 1⁵ DEFINITION.
 - 2⁵ STRUCTURE.
 - 3⁵ FUNCTIONS.
 - 1⁴ CORNEA.
 - 1⁵ DEFINITION.
 - 2⁵ STRUCTURE.
 - 3⁵ FUNCTIONS.
 - 2⁴ CHOROID.
 - 1⁵ DEFINITION.
 - 2⁵ LAYERS.
 - 3⁵ FUNCTIONS.
 - 4⁵ CILIARY PROCESSES.

- 1⁶ DEFINITION.
- 2⁶ STRUCTURE.
- 3⁶ FUNCTIONS.
- 5⁵ IRIS.
 - 1⁶ DEFINITION.
 - 2⁶ STRUCTURE.
 - 3⁶ FUNCTION.
 - 4⁶ PUPIL.
- 3⁴ RETINA.
 - 1⁵ DEFINITION.
 - 2⁵ STRUCTURE.
 - 3⁵ FUNCTION.
- 4⁴ CONJUNCTIVA.
 - 1⁵ DEFINITION.
 - 2⁵ STRUCTURE.
 - 3⁵ FUNCTION.
- 5³ HUMORS.
 - 1⁴ AQUEOUS.
 - 1⁵ LOCATION.
 - * 2⁵ QUANTITY.
 - 3⁵ REACTION.
 - 4⁵ SHAPE.
 - 5⁵ FUNCTIONS.
 - 2⁴ CHRYSTALINE LENS.
 - 1⁵ LOCATION.
 - 2⁵ SIZE.
 - 3⁵ SHAPE.
 - 4⁵ SUSPENSORY LIGAMENT.
 - 5⁵ CHANGES.
 - 6⁵ FUNCTIONS.
 - 3⁴ VITREOUS.
 - 1⁵ LOCATION.
 - 2⁵ QUANTITY.
 - 3⁵ SHAPE.

4⁵ HYALOID MEMBRANE.

5⁵ FUNCTIONS.

3² PROTECTING ORGANS.

1³ ORBIT.

1⁴ DEFINITION.

2⁴ BONES THAT FORM THE WALLS.

3⁴ CUSHION OF FAT.

2³ EYE-BROWS.

1⁴ DEFINITION.

2⁴ HAIRS.

3⁴ FUNCTIONS.

3³ EYE-LIDS.

1⁴ DEFINITION.

1⁴ STRUCTURE.

3⁴ EYE-LASHES.

4⁴ FUNCTION.

4³ LACHRYMAL APPARATUS.

1⁴ LACHRYMAL GLANDS.

2⁴ LACHRYMAL DUCTS.

3⁴ LACHRYMAL CANALS.

4⁴ LACHRYMAL SAC.

5⁴ NASAL DUCT.

4² HYGIENE.



HEARING.

1¹ DEFINITION.

2¹ ORGANS.

1² AUDITORY NERVES.

1³ ORIGIN.

2³ COURSE.

3³ DESTINATION.

4³ FUNCTION.

2² EAR.

1³ EXTERNAL.

1⁴ MEATUS AUDITORUS.

1⁵ SHAPE.

2⁵ SIZE.

3⁵ GLANDS.

4⁵ HAIRS.

1⁴ PINNA.

1⁵ STRUCTURE.

2⁵ PARTS.

3⁵ FUNCTIONS.

2⁴ MEMBRANA TYMPANI.

2³ MIDDLE OR TYMPANUM.

1⁴ DEFINITION.

2⁴ BOUNDARIES.

3⁴ OPENINGS.

1⁵ SMALL.

2⁵ LARGE.

1⁶ EUSTACHIAN TUBES.

1⁷ DEFINITION.

2⁷ SIZE.

3⁷ FUNCTION.

2⁶ MASTOID CELLS.

3⁶ FENESTRA OVALIS.

4⁶ FENESTRA ROTUNDA.

5⁶ MEATUS AUDITORUS EXTER-
NUS.

4⁴ BONES.

1⁵ MALLEUS.

2⁵ INCUS.

3⁵ ORBICULAR.

4⁵ STAPES.

5⁵ FUNCTIONS.

3³ INTERNAL OR LABYRINTH.

1⁴ DEFINITION.

2⁴ MEMBRANOUS.

3⁴ FLUIDS.

4⁴ VESTIBULE.

1⁵ DEFINITION.

2⁵ SIZE.

3⁵ FUNCTIONS.

5⁴ SEMICIRCULAR CANALS.

1⁵ DEFINITION.

2⁵ SIZE.

3⁵ FUNCTIONS.

6⁴ COCHLEA.

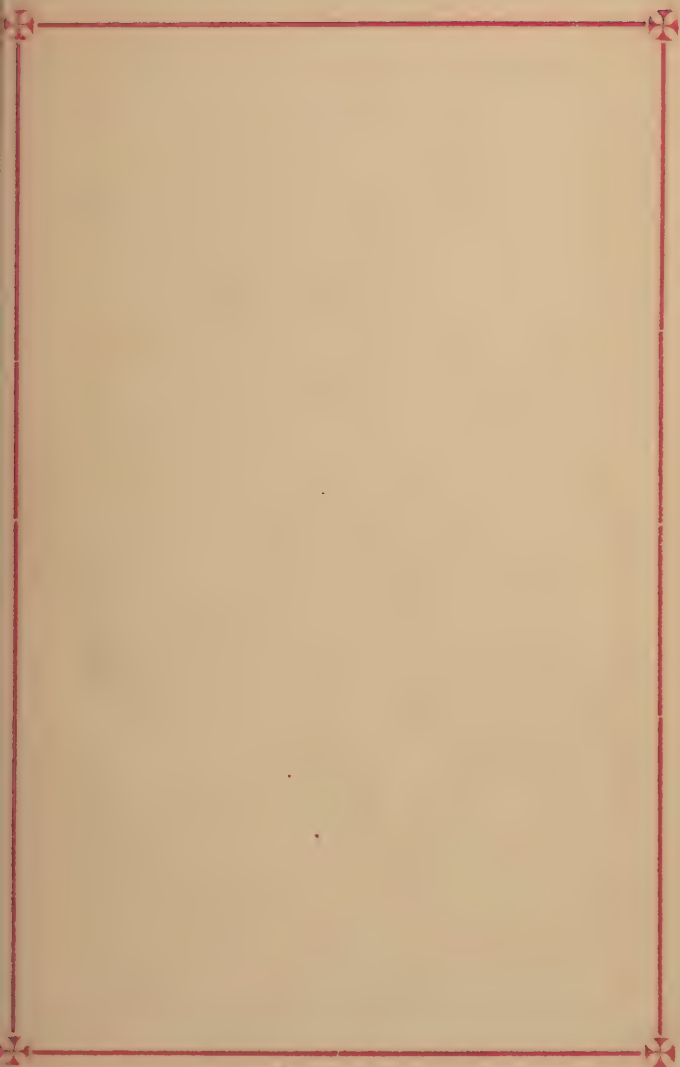
1⁵ DEFINITION.

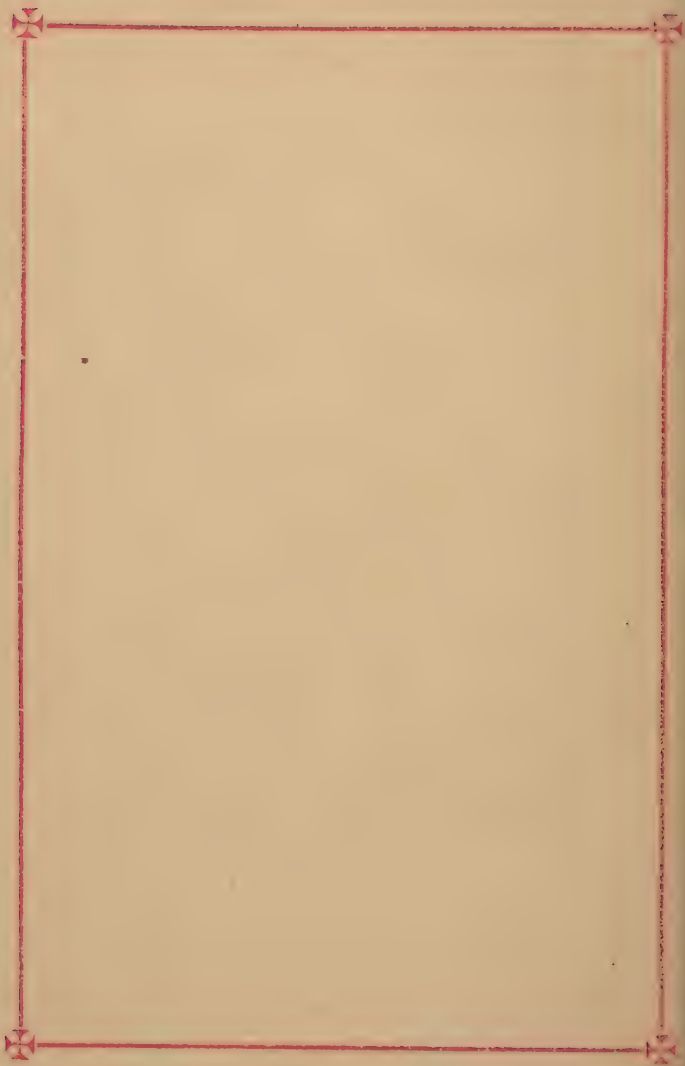
2⁵ SHAPE.

3⁵ SIZE.

4⁵ FUNCTION.

3² HYGIENE.





QS P637o 1882

61120960R



NLM 05041736 0

NATIONAL LIBRARY OF MEDICINE